

REMARKS

Claims 39-47 and 49-70 were pending prior to this Office Action, with claims 52-55 and 58 being withdrawn. In the above-identified Office Action, the Examiner has rejected all the claims. Applicants appreciate the Examiner's detailed comments in the Office Action.

Applicants are currently amending claims 39, 40, 44, 45, 49-51, 56, 57, 59, and 64 to further clarify the subject matter regarded as the invention. Support for these amendments are provided in the application as originally filed. No claims currently are being canceled or added. Accordingly, claims 39-47 and 49-70 remain pending, with claims 52-55 and 58 still being withdrawn.

In view of the above amendments and the following remarks, Applicants respectfully request that the Examiner reconsider and withdraw the outstanding rejections.

I. Claim Rejections under 35 U.S.C. § 101

Claims 39-47, 49-51, 56-57 and 59-63 were rejected under 35 U.S.C. § 101 for allegedly not being concrete. The Office Action "questions that getting a user's attention could translate to an improvement in the user's concentration."

To expedite the prosecution and to minimize any possibility of ambiguity, Applicants have amended the claims to state that a failure to receive a user input within a set time period is indicative of a reduction in a user's level of concentration, and that adjusting the study materials is to attempt to improve the user's concentration. It is difficult to guarantee that a user's level of concentration is improved, for example, by adjusting the study materials because the user may have walked away from the study materials. Nevertheless, there are things that can be done to attempt to improve concentration level. For example, as explained in the specification, a textual, other visual or an auditory change to study materials can help refocus an otherwise distracted user. Thus the term "attempt" is properly used in the claims. Applicants also note that a search of the USPTO database shows that the term "attempt" has been used in the claims of over 4000 patents.

II. Summary of Prior Art Claim Rejections

Claims 39-40, 43-44, 49-50, 56-57, 59-60 and 62 were rejected under 35 U.S.C. 102(e) as allegedly being anticipated by Cook et al, US 5,727,950 (hereinafter, "Cook").

Claims 45-47, 50-51, 61, 63 and 64-70 were rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of Collins et al, US 5,437,553 (hereinafter, "Collins").

Claims 45 and 70 were rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of Lundberg et al, US 5,738,527 (hereinafter, "Lundberg").

Claim 69 was rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of Reiber et al, US 5,681,170 (hereinafter, "Reiber").

Claims 41 and 42 were rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of Gevins et al, US 5,726,987 (hereinafter, "Gevins").

III. Discussion of Claims

A. Claim 39

Independent claim 39, as amended, requires "setting a time period based on the level of difficulty of the study materials". Additionally, claim 39 also requires that "upon failure to receive a user input to the computer via a keyboard or position-pointing device within the time period [set based on the level of difficulty], which is indicative of a reduction in the user's level of concentration, adjusting the study materials for presentation on the subject to attempt to improve the user's concentration in learning the subject." For example, the time period set can be relatively short if the level of difficulty is relatively low, because it is expected that a user will be able to provide an input relatively quickly. In contrast, the time period set can be relatively long if the level of difficulty is relatively high, because it is expected that a user will take longer to provide an input.

Cook mentions measuring time latency.¹ Cook also states that it can offer hints to a user after a relatively long period without an answer,² or if no user input is received in a time period adaptively determined.³ However, Cook never teaches or suggests that the time period, after

¹ See Cook, column 49, lines 21-41

² See Cook, column 28, lines 53-54

³ See Cook, column 28, lines 18-22

which Cook will provide a hint to a user, is set based on the level of difficulty of study materials. More generally, Cook does not teach or suggest adjusting study materials, upon failure to receive a user input to a computer via a keyboard or position-pointing device within a time period, where the time period is set based on the level of difficulty of the study materials.

A key component of Cook's system is to include "notations" in the instructional materials. Based on these notations, "the agent builds an adaptive model of the student's pedagogic characteristics, in other words the student's cognitive styles, by monitoring the course of the student's interactive instruction. The notations are the means for this monitoring."⁴ "[T]he information passed in the notations is standardized according to an instruction materials interface standard. This standard establishes a uniform way the materials independent data relating to student performance are to be provided to the agent and a uniform way for the agent to guide the student in a materials independent manner."⁵ In other words, the "time period adaptively determined" in Cook depends on the student's pedagogic characteristics, not on the difficulty level of the materials presented to the student.

Though Cook's instructional materials can have different levels of difficulty, as just explained, Cook never teaches or suggests that such levels of difficulty affect how long to wait for a user input, before adjusting the study materials. Further, none of the other applied references, alone or in combination, teaches or suggests these deficiencies of Cook.

For at least the reasons set forth above, Applicants respectfully request that the 35 U.S.C. 102(e) rejection of claim 39 be reconsidered and withdrawn.

B. Claims 40 - 43

Independent claim 40, as amended, requires "setting a time period based on the content of the study materials". Additionally, claim 40 also requires that "upon failure to receive a user input to the computer via a keyboard or position-pointing device within the time period [set based on the content], which is indicative of a reduction in the user's level of concentration, adjusting the study materials for presentation on the subject to attempt to improve the user's concentration in learning the subject." For example, the time period can be relatively short if the content of the study materials is a picture because it may not take a long time to read such study

⁴ See Cook, column 12, lines 14-24

⁵ See Cook, column 7, lines 14-19, with emphasis added

materials. In contrast, the time period can be relatively long if the study materials include a long paragraph of text that may take the user a relatively long time to read.

As mentioned above, Cook mentions measuring time latency,⁶ and that it can offer hints to a user if no user input is received in a time period adaptively determined.⁷ However, Cook does not teach or suggest that its time period is adaptively determined based on the content of the study materials. Rather, as explained above, the "time period adaptively determined" by Cook depends on the student's pedagogic characteristics, in a materials independent manner.

Cook never teaches or suggests that the time period, after which Cook will provide a hint to a user, is set based on the content of the study materials. More generally, Cook does not teach or suggest adjusting study materials, upon failure to receive a user input to a computer via a keyboard or position-pointing device within a time period, where the time period is set based on the content of the study materials. Though Cook's instructional materials include content, as just explained, such content does not affect how long to wait for a user input, before adjusting the materials. Further, none of the other applied references, alone or in combination, teaches or suggests these deficiencies of Cook.

For at least the reasons set forth above, Applicants respectfully request that the 35 U.S.C. 102(e) rejection of claim 40 be reconsidered and withdrawn.

Claims 41-43 depend from and add additional features to independent claim 40. For at least the reasons set forth above with regards to claim 40, Applicants respectfully request that claims 41-43 should also be allowable over the cited references.

C. Claims 44-47, 49-51 and 64-70

Claim 44 requires "presenting study materials on the subject to the user via a first window of a computer, where the computer also has a second window". Additionally, claim 44 also requires that "upon failure to receive an input that the user enters into the first window of the computer within a [set] time period, when there is one or more inputs by the user to the second window of the computer during the time period, which is indicative of a reduction in the user's level of concentration, adjusting the study materials for presentation on the subject to attempt to improve the user's concentration in learning the subject." Cook does not teach or suggest the

⁶ See Cook, column 49, lines 21-41

⁷ See Cook, column 28, lines 18-22

above features, and none of the other cited references teaches or suggests these deficiencies of Cook.

For at least the reasons set forth above, Applicants respectfully request that the 35 U.S.C. 102(e) rejection of claim 44 be reconsidered and withdrawn.

Claims 45-47, 49-51 and 64-70 depend from and add additional features to independent claim 44. For at least the reasons set forth above with regards to claim 44, Applicants respectfully assert that claims 45-47, 49-51 and 64-70 are also allowable over the cited references.

D. Claims 56-57

Independent claim 56 requires "setting a time period based on the level of difficulty of the study materials". Additionally, claim 56 requires "upon failure to receive a user physical input within the time period [set], which is indicative of a reduction in the user's level of concentration, adjusting the study materials for presentation on the subject to attempt to improve the user's concentration in learning the subject." For similar reasons to those discussed above with regards to claim 39, Applicants respectfully request that the rejections of claim 56, and its dependent claim 57, be reconsidered and withdrawn.

E. Claims 59-63


Independent claim 59 requires "setting a time period based on the level of difficulty of the study materials; monitoring an amount of time to receive an input from the user to the computer via a keyboard or position-pointing device, with the input being in response to the study materials; and when a user input via the keyboard or position-pointing device in response to the study materials is not received within the time period, which is indicative of a reduction in the user's level of concentration, then adjusting the study materials for presentation on the subject to attempt to improve the user's concentration in learning the subject." For similar reasons to those discussed above with regards to claim 39, Applicants respectfully assert that claim 59, and its dependent claims 60-63, are patentable over the cited references. Accordingly, Applicants respectfully request that the rejections of these claims be reconsidered and withdrawn.

IV. Conclusion

In light of the above, it is respectfully requested that all outstanding rejections be reconsidered and withdrawn. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 50-0727 for any matter in connection with this response which may be required.

Respectfully submitted,

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